McManus on Second Best

Dr. McManus's comments[1] on our paper[2] provide some valuable extensions to our original propositions, and his geometric treatment a useful alternative approach for those who prefer a technique of this kind. His chief point of criticism, that our 'numeraire' has not the degree of arbitrariness necessary for it to be so named, is well taken[3] and our paper stands amended in that respect.

There remains a point of disagreement, however, in which neither our own approach, nor McManus's, seems clearly to be in the right, and this is a point of the highest importance in relation to the whole analysis of the welfare aspects of monopoly. In our article, the reference to a 'numeraire' arose chiefly from the analysis of the monopoly situation, the situation which McManus also takes up.

We wrote, attempting to define a monopoly situation in a general equilibrium setting that 'the monopoly will set the price of x higher (in terms of some numeraire, which will be taken to be z) in relation to marginal cost than in the conditions of the Paretian optimum'. McManus quotes and criticises this statement on the grounds that 'for any given unit of account, the price and marginal cost of any good are measured in the *same* units and may be directly compared with each other. Perfectly competitive behaviour makes them equal to each other and monopolistic behaviour implies that price is set higher than marginal cost'.

This description of monopoly behaviour is simply not complete. For example, take a very simple case in which there are two industries, the monopoly and the rest, and in which costs are constant. Suppose that, initially, the monopolist is at equilibrium with his price at $k>1$) times his marginal cost. Now suppose the government to intervene and adopt the Lernerian policy of raising the price in the rest of the economy to a level k times marginal cost. As McManus says, this brings about a situation in which the Paretian optimum conditions are satisfied. But why should the monopolist be satisfied ? Whatever the difficulties of codifying a monopolist's behaviour in general equilibrium,[4] it is surely desirable to assume that the monopolist will always act to increase his profits when demand conditions so permit.

Take the case above. If the government adopts the Lernerian policy, it raises the price of the non-monopoly good, and so lowers the *relative* price of the monopoly good. Since the demand for the monopolist's good depends upon its relative price (ignoring income effects), the monopolist will find himself facing an expansion in the quantity demanded of his product[5] and will always react if his costs are not decreasing at too rapid

[1] "Comments on the General Theory of Second Best," this issue.
[2] "The General Theory of Second Best," *Review of Economic Studies*, Vol. XXIV (1).
[3] A similar comment was made verbally to the authors by Professor J. E. Meade soon after publication of the original article.
[4] Somewhat similar difficulties were discussed in relation to an article by I. F. Pearce in an earlier issue of this journal. See articles and comments by I. F. Pearce, Kelvin Lancaster and S. A. Ozga in the *Review of Economic Studies*, Vols. XX (3), XXIII (2) and XXV (1).
[5] i.e., at the old accounting price.

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a rate, by raising the (accounting) price of his product. Thus, if the non-monopoly sector price increases to k time marginal cost to match the monopolist's original price policy, the monopolist will always react by further raising his price to something greater than k times marginal cost.

We cannot, therefore, simply define a monopolistic policy by the relationship between accounting prices and costs, but must always consider the relationship between these *relative* to their relationship elsewhere.

The difficulty is, which relationship to use ? Our original choice was the relationship between price and marginal cost in some industry chosen at random, but, as McManus correctly points out, the status of this industry is higher than that of a mere numeraire. In effect, the ' hidden assumption ' for which McManus searches but does not correctly locate is that we have assumed it is to the price of the n'th commodity that the monopolist's reactions are geared. This is a useful enough assumption in many models—the n'th commodity might, for example, be a competitively produced good which is the chief substitute for the monopolist's output—but it is not general. Perhaps the answer in the general case is to assume the monopolist's relationship between price and marginal cost to all other industries, the functional relationship being ultimately determined by demand conditions. This will certainly confront us with some complex analysis.

Our intent in writing the original article was to indicate that piecemeal application of single Paretian welfare conditions in a situation in which *not all* such conditions could be satisfied might well decrease, rather than increase, welfare. McManus's comments certainly add strength to our original contention.

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